

Writing Methodology

Writing the methodology lies at the core of the paper, and fulfills one of the basic principles underlying the scientific method.

Any scientific paper needs to be verifiable by other researchers, so that they can review the results by replicating the experiment [1] and guaranteeing the validity [2].

To assist this, you need to give a completely accurate description of the equipment and the techniques used for gathering the data.

Finally, you must provide an explanation of how the raw data [3] was compiled and analyzed.

Writing Methodology Allows Verification

Other scientists are not going to take your word for it, and they want to be able to evaluate whether your methodology is sound.

In addition, it is useful for the reader to understand how you obtained your data, because it allows them to evaluate the quality of the results [4].

For example, if you were trying to obtain data about shopping preferences, you will obtain different results from a multiple-choice questionnaire [5] than from a series of open interviews.

Writing methodology allows the reader to make their own decision about the validity of the data.

If the research about shopping preferences were built upon a single case study [6], it would have little external validity [7], and the reader would treat the results with the contempt that they deserve.

The Structure Behind

Whilst there are slightly different variations according to the exact type of research, the methodology can be divided into a few sections.

- Describe the materials and equipment used in the research.
- Explain how the samples were gathered, any randomization techniques and how the samples were prepared.
- Explain how the measurements [8] were made and what calculations were performed upon the raw data.

- Describe the statistical techniques used upon the data.

That is the very basic structure of writing methodology, and it will clarify all of the information.

The writing for the method should be clear and direct, concise and straight to the point. The major point is not to stray off into irrelevance, and this process is helped by making a few basic assumptions.

For example, in a psychology paper, there is no need to describe a Skinner box, as that is well known to psychologists. However, you would need to explain exactly how the box was used, to allow exact replication.

Whilst not always possible, the methodology should be written in chronological order, always using the past tense.

Writing Methodology at the Core of the Research Paper

A well laid out and logical methodology will provide a great backbone for the entire research paper, and will allow you to build an extremely strong results section.

The only real difficulty with the methods section is finding the balance between keeping the section short, whilst including all of the relevant information.

The other problem is finding the correct style of writing [9]: APA guidelines suggest that you should use 'I' and 'We', but most supervisors still prefer an impersonal passive tense. Check this with your supervisor before you start writing, to avoid unnecessary editing!

Citation:

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